DOCUMENT RESUME

ED 359 946 IR 054 441

AUTHOR	Ford, Helen
TITLE	The Education of Staff and Users for the Proper Handling and Care of Archival Materials: A RAMP Study with Guidelines.
INSTITUTION	United Nations Educational, Scientific and Cultural Organization, Paris (France). General Information Programme.; United Nations Intergovernmental System of Information in Science and Technology.
SPONS AGENCY	International Council on Archives, Paris (France).
REPORT NO	PGI-91/WS/17
PUB DATE	91
NOTE	46p.
PUB TYPE	Guides - Non-Classroom Use (055) -- Reports - Descriptive (141)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Archives; Developing Nations; Equipment; Guidelines; *Preservation; *Records Management; Reprography; Training Methods

ABSTRACT

The United Nations Educational, Scientific and Cultural Organization (UNESCO) Records and Archives Management Programme (RAMP) works primarily to help developing countries meet archive and record management needs. This study is intended to inform archivists, curators, and users in the proper handling and care of archival materials. The publication includes: (1) a description of the context of conservation and preservation, including costs, approaches, and technology; (2) an overview of the varieties of archival materials and the kinds of care they may need; (3) a description of kinds of physical aids, reading room aids, copies, furnishings, and handling techniques for preservation; (4) a discussion of training users and staff for the care and handling of archival materials; and (5) guidelines for aids and training that will enhance preservation. (Contains 12 references.) (KRN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED359946

PGI-91/WS/17

The education of staff and users for the proper handling and care of archival materials: a RAMP study with guidelines

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE THIS MATERIAL IN **OTHER THAN PAPER COPY** HAS BEEN GRANTED BY

C. Coudert-Schklowski

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

IR 054-441

General Information Programme and UNISIST

United Nations Educational,
Scientific and Cultural Organization

Paris, 1991

Original: English

PGI-91/WS/17
Paris, October 1991

THE EDUCATION OF STAFF AND USERS FOR THE PROPER HANDLING OF ARCHIVAL MATERIALS: A RAMP STUDY WITH GUIDELINES

prepared by

HELEN FORD

General Information Programme and UNISIST

United Nations Educational,
Scientific and Cultural Organization

This document is the photographic
reproduction of the author's text

Recommended catalogue entry:

Ford, Helen

The education of staff and users for the proper handling and care of archival materials: a RAMP study with guidelines / prepared by Helen Ford [for the] General Information Programme and UNISIST. - Paris, UNESCO, 1991. - iv, 38 p., 30 cm. - (PGI-91/WS/17)

I - Title

II - UNESCO. General Information Programme and UNISIST

III - Records and Archives Management Programme (RAMP)

c - UNESCO, 1991

PREFACE

In order to aid Member States, particularly developing countries, to meet their needs in the specialized areas of Archives Administration and Records Managemant, the Division of the General Information Programme has developed a long-term Records and Archives Management Programme (RAMP).

The overall objectives of RAMP are:

- to create awareness and promote understanding, among and within governments of Member States, of the values and usefulness of records and archives as basic information resources;

- to assist countries and regions, upon request, in the organization and development of the records and archives management systems and services necessary for full and effective utilization of these basic information ressources;

- to promote and assist in the advancement and dissemination of knowledge through the training of professionals in the field of archives and records management which is the basis for sound archival policies and harmonious archival development.

RAMP avtivities concentrate on: infrastructure development; training and education; protection of the archival heritage; promotion of the development and application of modern information technologies and research in archival theory and practice.

The present study, prepared under contract with the International Council on Archives (ICA), is intended to inform archivists, curators, and users in the proper handling and care of archival materials. It offers analysis of the problems, suggestions for handling techniques and training and conclusions about the benefits of careful handling.

Comments and suggestions regarding the study should be addressed to the Division of the General Information Programme, UNESCO, 7, Place de Fontenoy, 75007 Paris, France. Other studies prepared under the RAMP programme may be obtained at the same address.

TABLE OF CONTENTS

			page
1.	INTRODUCTION		1
2.	CONTEXT		2
2.1	Problems of the twentieth century		2
2.2	Increasing cost of conservation		3
2.3	Mass treatment	- lamination	3
2.4		- leafcasting	3
2.5		- deacidification	3
2.6	Preservation awareness		4
2.7	Competing claims on budgets		4
2.8	Increased expectations of users		4
2.9	Effects of modern technology		5
3.	ARCHIVAL MATERIALS		5
3.1	Single sheet material		5
3.2	Files		6
3.3	Maps, plans and charts		6
3.4	Volumes		7
3.5	Textiles		8
3.6	Photographs		9
3.7	Audio visual and machine readable records		9
4.	SOLUTIONS		10
4.1	Physical aids		10
4.1.1	Mechanical handling devices		10
4.2	Reading room aids		12
4.2.1	Trays or shallow boxes		12
4.2.2	Volume supports		13
4.2.3	Restraints		15
4.2.4	Transparent sheets		16
4.2.5	Ultra-violet lamps		16
4.2.6	Light boxes		16
4.3	Surrogates and their production		16
4.3.1	Microforms		16
4.3.2	Electro-static copies		16
4.3.3	Microfilm reader/printers		16
4.4	Furniture in the reading rooms		17
4.4.1	Desks		17
4.4.2	Tables		17
4.4.3	Easels		17
4.5	Guides for handling archival material		17
4.5.1	Rules		18
4.5.2	Explanations		19

4.5.3 Videos and exhibitions 25
4.6 Enforcing the rules 26

5. TRAINING 27

5.1 Training for readers 27
5.1.1 Individuals 27
5.1.2 Group visits 30
5.1.3 Videos 30
5.1.4 Staff demonstrations 30
5.2 Training for staff 30
5.2.1 Core skills 30
5.2.2 Handling skills for repository staff 32
5.2.3 Handling skills for reprographic staff 33

6. SUMMARY GUIDELINES 35

7. CONCLUSIONS 37

8. FURTHER READING 38

1. INTRODUCTION

1.1 Archival materials are at risk due to their unique nature and the fact that they are handled by the general public. In this they differ from library materials or museum objects which usually fall into one category or the other - not both.

1.2 In addition the materials out of which such archives are created are familiar in everyday use. Paper is a disposable commodity, pencil can be erased, correction fluid can obliterate ink or typescript. In consequences modern papers, photographs and audiovisual material may appear less historically valuable than those on which antiquity has bestowed a certain dignity.

1.3 The post war proliferation of record offices and archives available to the general public has extended the use of such records to a much wider range of users than ever before. The image of the antiquarian connoisseur of muniments jealously poring over records to which only he has access has changed; archival sources are the basis not only for professional historians and academics but also family historians, local historians, adult students, school children, journalists, economists and the merely curious. Increasing demand has led to a requirement from all custodians of such archives for increased resources, but such resources in terms of staff and storage are expensive and rarely regarded as a priority.

1.4 Increased demand, however, leads to additional and unwelcome wear and tear on archival materials which are already at risk for numerous reasons in the late twentieth century; and at the same time the cost of conventional conservation has soared. As a result emphasis has been put on preservation techniques; careful handling practices are one of the most important and cost-effective.

1.5 Different materials demand different good handling solutions. Single items come in a variety of formats - flat, rolled, large, small, neatly stored on their own or amongst other documents. Files by contrast are frequently overfull and may contain extraneous material insufficiently secured. Maps and plans cause particular problems for handling due to their size while volumes are frequently bulky, may lack part of their binding and are often damaged due to strain being placed on the joints. Textiles may include disintegrating

samples pasted into pattern books or complete garments. Photographs, which may be in albums on poor quality mounts but are often stored loose, are at particular risk from handling. Audio visual and machine readable records have an apparent solidity which may be misleading and subject to particular abuse when being used.

1.6 Practical solutions adopted in libraries and archives include the provision of specialised equipment such as boxes in which to present materials to readers, book trolleys with shelves at an angle, map trolleys with support for outsize items, cushions or cradles on which to rest volumes, covered chains or weights to hold down pages or rolled items and transparent sheets to protect maps or plans which readers wish trace. Information for readers about careful handling can be provided in the form of rules for the use of the search rooms which should be required reading on registration, notes on desks, explanatory leaflets or videos on care. These must include guidelines on handling, reading, tracing and copying (where applicable), and the right to refuse permision for any of these mustbe retained. Example by the staff is probably the most cogent form of persuasion towards careful practice.

1.7 All new staff should be trained in the care of records as a matter of course. Periodic training for existing staff on handling archival materials should be compulsory and it should include not only the staff who normally act as porters or repository assistants but also the staff who work on the documents, the reprographic staff and anyone who has occasion to handle archival material. It should be seen to apply to everyone. Lax practices at higher levels will be copied by junior staff and the latter must not feel singled out for attention. Basic rules must include those for loading, carrying, reading, copying, lending and exhibiting.

The implications of careful handling both for a cost-effective service at present and the future preservation of the archival material are worth some careful thought.

2. CONTEXT

2.1 **Problems of the twentieth century.** The late twentieth century has been witness to a growing concern for the survival of archival and library material. Both are threatened by a combination of atmospheric pollutants such as sulphur dioxide, poor quality paper made from wood pulp and increased handling because of their popularity. The expansion of

literacy has added to the bulk of material available, but it has vastly increased the demands on archives and has contributed to the problems of preservation. The brittle book syndrome, much heralded in the United States where the accumulated effects of pollution, poor storage and central heating were identified earlier than in Europe, alerted libraries to the massive problems they are facing. Archives and record offices had, in many instances, faced this problem before but not on such a scale. Archive conservators, repairers or technicians were accustomed to dealing with fragile materials and were becoming increasingly professional in their approach. Binderies and libraries had much to learn but their experience provided useful publicity about the enormity of the problem.

2.2 **Increasing cost of conservation.** Sheer bulk of material, therefore, is one consideration. Labour costs are another. In parallel to the growing stature of the conservation profession came a shortage of labour and increasing staff costs. Operations that had been relatively basic but carried out by unskilled staff became time consuming and, in many cases, prohibitively expensive. Post World War II optimism about the possibilities of coping with the mass of material needing attention has dwindled to a realisation that, of all the preservation options, traditional paper conservation is the most expensive. And this applies even to such mass deacidification treatment or mechanical conservation programmes as exist.

2.3 **Mass treatment - lamination.** In some archives and libraries lamination has been regarded as an appropriate method of last resort for much twentieth century material, since it can be carried out by semi-skilled, and therefore comparatively cheap labour; but it suffers from the inherent disadvantage of using heat or materials which have to be used with extreme care to avoid health hazards.

2.4 **Mass treatment - leaf casting.** Leaf casting, the process whereby holes in paper are filled in with cellulose pulp using a vacuum table, is a noticeably quicker method of conservation than traditional paper repair but it has limited use in archives. Bulk applications are more appropriate in libraries where an entire book can be repaired using identical pulp. Training is still required and it is usually undertaken by conservators, thus losing the advantage of cheap labour cost.

2.5 **Mass treatment - de-acidification.** Mass de-acidification has also proved more valuable

in library situations than in archives. The diversity of material in the latter has, to date, defeated any economies of scale although there are promising research developments which may be applicable in the future.

2.6 **Preservation awareness.** Thrown back, therefore, on traditional resources archivists have responded with an increased appreciation for prevention rather than cure. Gradually the word preservation has crept into the vocabulary, meaning essentially all measures which can be taken to ensure the survival of archival material. These include appropriate storage, regulated environmental conditions, reduction of lighting levels, substitution copying where necessary, good handling practice and, as a final resort, conservation work.

2.7 **Competing claims on budgets.** Two other factors have forced this shift in attitude; not only has conservation work become more expensive, it also has to compete against other claims within an increasingly tight archive budget. Both public and private archives have suffered from spiralling costs in the 1980s combined with an increased awareness of the fragility of buildings which house not only archives but also museums and libraries. Without an active philanthropic movement equivalent to that of the nineteenth century there is only the legacy of such buildings, some of which were not soundly constructed. Ordinary maintenance to proper archival standards can count as preservation; rehabilitation of seriously run-down buildings is capital expenditure which eats into the budget. In the context of a society where every move made by institutions which consume budgets rather than earning money requires justification, difficult choices may have to be made between funding urgent conservation work and the equally essential building repair work.

2.8 **Increased expectations of users.** The other factor is the increased expectations of the users who are knowledgeable and demanding. The variety of people visiting archives increases every year and greater leisure time has encouraged a growth in historical research at all levels. It is not uncommon for 70-80% of readers in some archives to be studying family history and many archivists acknowledge that it is only the pressure of persistent users such as these that has permitted any expansion in the services which they can offer. A rising curve of demand logged on a graph reinforces a sense of being needed; it also illustrates the toll on the archives.

2.9 **Effects of modern technology.** Modern technology has imposed other strains, noticeably through the widespread practice of photo-copying. To the academic student under pressure to finish a PhD within a specified time photocopies are an essential tool where archival material is either not available locally or when hours of access are limited. The schoolchild is taught that illustration of the use of original material is well regarded, the local history teacher expects to be able to provide students with copies for the study of palaeography, the journalist expects to take texts away so that they can be quoted accurately. If photo-copying is unsuitable microfilming may be the alternative. Both processes are probably more damaging to the original than mere handling by a reader but expectations are so uniformly high that to withdraw such facilities would create an uproar.

It is in this context of improved professional ability, rising costs, greater opportunities for study, and increasing expectations about the demands which can be made to aid research that the issue of handling becomes all-important as a preservation measure.

3. ARCHIVAL MATERIALS

Archival materials have different properties and in the same way that they may require different storage conditions and temperatures they also demand a variety of handling solutions.

3.1 **Single sheet material** A single document is usually produced to the reader on its own. It may be stored with other items but if it has a discrete reference it should count as one order. It may be flat or rolled, large or small, stored in its own case or boxed with other similar material. It poses problems for security if it is small and particular problems in handling if it is large. Such items can often be damaged on extraction or when they are returned to storage if they have no individual covers. They are also susceptible to loss if they are handled with a quantity of other records. Poor quality paper for such large items as posters frequently results in unintentional damage in transit. Letters sealed with wax frequently have tears made when they were originally opened and which render the paper vulnerable to further tearing. Appended seals are also in danger if subjected to rough treatment since the sealing wax has frequently become brittle and is flaking off. In cases where single sheet items are requested but are presented in a box together with other similar material there is a serious danger of over-handling during the identification period.

3.2 **Files.** Files comprise the major part of most modern public archives and the contents are usually listed under one reference. For the reader, searching for a particular item, as opposed to reading through the history of a project, the temptation is to flick quickly and carelessly through the contents. In the course of such a search paper, maps, plans, photographs and sometimes even small exhibits may be found. It is likely that they will have received scant attention in being handled during their active working life. File covers are frequently made of thin card on which have been written details of distribution or notes. While acting as some form of security for the contents such covers are themselves susceptible to damage, particularly at the joints. The tendency to overfill files reinforces the need for careful handling in the archive by both staff and users. Papers may be held in place either by ring binders or 'treasury tags' depending on local practice. In either case the papers will be weaker at the point at which they have been pierced and will need care in turning over. Pockets for enclosures are sometimes part of the construction to enable the owner to store material which for one reason or another is unsuitable for securing in the normal fashion. Envelopes full of small items or photographs are occasionally tagged in with the other papers; failure of the adhesive used in making the envelope or a missing flap can lead to the loss of contents.

3.3 **Maps, plans and charts.** Of all archival materials these are possibly the most likely to be damaged even before they come into the record office. If they are single items they may have been folded frequently, used in the field or taken to sea; the folded areas will be inherently weak if not already splitting. They are thus at risk if moved from map drawers to the search room without support. If they are stored in rolls they are less vulnerable but there are many repositories where there is insufficient shelf depth to store maps in this way without the danger of piling an unacceptable number on top of one another. Difficulty in extracting one from the bottom on the pile can easily lead to damage.

Maps and plans bound into volumes are frequently in bad condition due to failure to replace them carefully. Such items are often on a flimsy type of paper, incompatible with the surrounding papers and setting up strains where the two are joined. If folded they frequently fall out of their folds and stand proud of the foredge, resulting in damage when the volume is re-boxed or reshelved.

Large size items stored vertically are at risk from the guards on which they hang if an

unsuitable type of paper or adhesive has been used. They are also sometimes difficult to extract if the older type of hanging storage is used. Vertical storage should never be used where there is any weakness in the paper unless the items are encapsulated and supported first.

3.4 **Volumes.** Volumes fall into two categories; those which are records themselves such as diaries, logs and commonplace books, and those which were created as a protection for records regarded as being at risk. Repositories cannot afford to ignore the problems of either.

The nineteenth century habit of binding archives into uniform volumes has resulted in considerable wear and tear, although it is an open question as to whether similar or greater damage might not have occurred had the items been unprotected. Initial damage done to a volume through handling is likely to be to the binding rather than the contents but as the former is broken down the latter are at increasing risk. Poor materials compound the problem.

The weak part of most bindings is the joint between the boards and the spine, whether on the outside or on the inside at the point at which the end leaf is pasted down on the boards. Once the boards have come loose the contents are no longer protected adequately. Another frequent area of stress is the head band; careless extraction from shelves by pulling the volumes out from the top results in damage which ultimately causes the spine to drop off. Failure by the original binder to provide boards sufficiently large to protect all the contents can lead to damage when the volumes are removed from or replaced on the shelf. If the text block has dropped due to weight or inadequate sewing the bottom edges of the records are liable to suffer. Similarly, if folded contents become unfolded and stand proud of the boards they may be damaged. Enthusiasm for protection by binding frequently lead to the inclusion of different types of material being placed close to one another; paper, parchment, works of art on paper, textiles, photographs, tracings and the guards on which they are mounted can all contribute to the instability of a volume if they are expected to survive side by side.

Outsize volumes are at risk when being handled simply because of their bulk. Few bindings are sufficiently strong to withstand the stress of frequent use when the contents

are heavy or unwieldy. Even the physical removal of such volumes from the stacks is fraught with hazard simply because they are large and likely to be dropped.

Heavily used volumes, frequently those which are on open access in the reading rooms, suffer wear on the bottom of the boards when they are moved on and off the shelves. Metal or unlined wooden shelves are particularly damaging.

3.5 **Textiles**. These are frequently fragile through a history of poor storage conditions or having been subjected to too much light. The very familiarity of the material often leads the user to make unwarranted assumptions about its stability. Fabric samples stuck down in volumes are frequently supported by their backing but when removed are noticeably fragile. This may be due to the action of various dyes, particularly those from the nineteenth century which can weaken threads in time, to exposure to light which causes noticeable deterioration, to the adhesive with which they are stuck down, to the acidic nature of the support on to which they are stuck or to the reaction of one type of textile to another. Sample books are especially likely to suffer from this sort of damage and many of the problems in handling oversize volumes are also applied to them.

Covering materials for bindings such as velvet are likely to be worn and weak where the textile has been wrapped round the boards or attached to them. Handling such items is difficult whether they remain in situ or are removed for safety. By definition they were used on highly regarded volumes - treaties or royal indentures - and may include gold and silver threads which are heavy and can cause damage to the surrounding material.

Textiles made up into garments are sometimes found in archives as exhibits or part of collections of ephemera and are likely to be very fragile if they have been on display, or have been folded for any length of time. Handling them can cause weak threads to break or whole areas to disintegrate.

Cords which attach seals to documents are likely to break if subjected to sudden strain. Such cords are frequently made of different coloured threads intertwined and the dark colours, noticeably black and brown, are often particularly weak due to the constituents of the dyes. Failure to provide support when the weight of the seal, and sometimes the skippet (metal or leather case for the seal) as well, is put on the cord may result in damage to both the seal and document.

3.6 **Photographs.** These provide another instance where the object is so familiar that the introduction of proper handling techniques is particularly difficult. Most people handle photographs at some point during their lives, but few give any thought to preservation techniques.

All types of photographs consist of a base with a coating of light sensitive chemicals on top; both are vulnerable to use. The base may be any of a number of types of material - metal, glass, paper, cellulose nitrate, cellulose acetate or polyester. Metal and paper are organic materials and therefore at risk from mishandling in the same way as other archives of the same constituents; glass has the major drawback of fragility if dropped and, like the three remaining synthetic bases, is susceptible to scratches. The emulsion surface on which the image has been captured is also vulnerable as well as likely to suffer damage if oil or dirt is deposited on the surface.

The format in which photographs are presented also poses problems in handling. Early photographs may well be in small frames, single or double, covered with glass. Mounting photographs in albums was common practice to provide protection but the mounts themselves may be unsuitable or the albums overfull. Landscape photographs - whether a panorama or a record of all the children in one school - may have been rolled for more convenient storage. Individual photographs, sometimes very small, are often stuck in with other text or stored loose in envelopes. Glass plate negatives may be stacked too many to a box, risking breakage when handling.

3.7 **Audio visual and machine readable records.** The introduction of new technology in the twentieth century has resulted in both the creation of original material in audio visual and machine readable form and its use in archives. Microfilm, microfiche, gramophone records, film and magnetic tape are all frequently found in reading rooms either as copies of the archival original or substitution copies made for preservation and security purposes. The apparently stable format in which most of these appear is misleading.

With the possible exception of optical discs, which are not as yet standard issue for readers, these records are as subject to abuse through handling as any others. The acoustic sound records will be made of wax cylinders, paper rolls (for pianolas), shellac or polyvinylchloride. Computer tape and video tracks are on polyethylene trephthalate film

coated with binding material containing a magnetic pigment. Whether organic materials or not they can all be harmed by one or more of the following, most of which occur during handling - scratching, distortion, light, heat and magnetic flux. Since handling involves the use of machinery the potential for mechanical damage is also high.

4. SOLUTIONS

The solutions adopted to improve handling techniques will vary according to the circumstances of the individual repository and the type of archival material which is being produced. Those suggested here will not be suitable for all but can be adopted as appropriate. Publicity is one of the most important aspects of good handling practice and aids, such as supports for volumes or transparent sheets should be visible and available. Rules and advice should be clearly stated and easily obtained.

4.1 **Physical aids.** Visible signs of assistance in handling are a reminder that the archive takes care of its records and that it expects the readers to do the same. It cannot be emphasised too much that the wear and tear on records is inflicted by over-handling and that the staff are likely to handle records more than the public.

Moving the documents about is a problem faced largely by the staff rather than the readers. It is, however, crucial to have the correct means of transport. The equipment necessary will depend upon the size of the record office and the configuration of the stacks and the reading rooms. It is always preferable to have both on the same floor.

4.1.1 **Mechanical handling devices** are required if there is a need to move archival material from one floor to another or over long distances. Carrying any quantity by trolley or hand is too risky over long distances although this may have to be the solution for the transport of single oversize or bulky items. Continuous tracks or paternosters with rigid containers for the documents can be installed for both vertical and horizontal carrying but they should never be used for fragile documents.

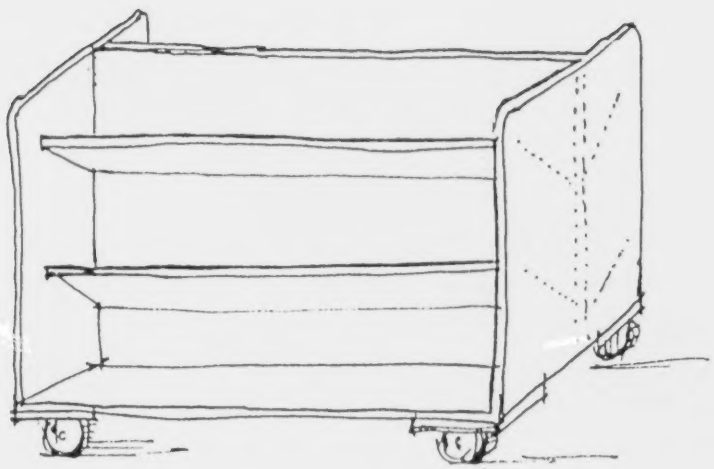
Most archives would be more likely to rely on the use of lifts and trolleys. Lifts should be of sufficient size to accommodate trolleys used for carrying documents and they should operate between all the floors of the building; documents will need to be moved in and out

of stacks not only for readers but also for accessioning, re-storage, conservation, and reprographic work. In a small building it may be possible only to have a book-lift; if so it should be constructed to avoid any danger of documents falling down the shaft.

Standard trolleys should be soundly constructed out of stainless steel or inert materials if possible and have rubber wheels to absorb shock. They should have no more than two shelves and no rim round the edge which might damage documents in transit. Several small trolleys are better than fewer large ones since carrying too many items at once is liable to make them awkward to manoeuvre and unbalanced. Staff should be instructed as to how to stack boxes of documents on them and how to use them; careless handling with a trolley load can result in mass damage.

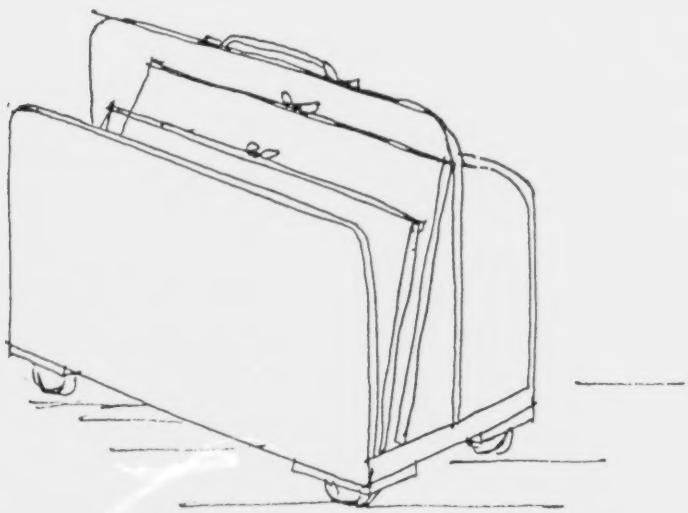
Book trolleys should be constructed to carry books securely in an upright position; the shelves should be angled to hold them safely (Fig 1).

Fig. 1.



Map trolleys need to be used for varying sizes of document in specially constructed folders. These should support the map, plan or poster and be used whenever this type of material is removed from the stacks. The trolleys should be deep sided with an additional central support but be open ended to allow for outsize items (Fig. 2)

Fig. 2.

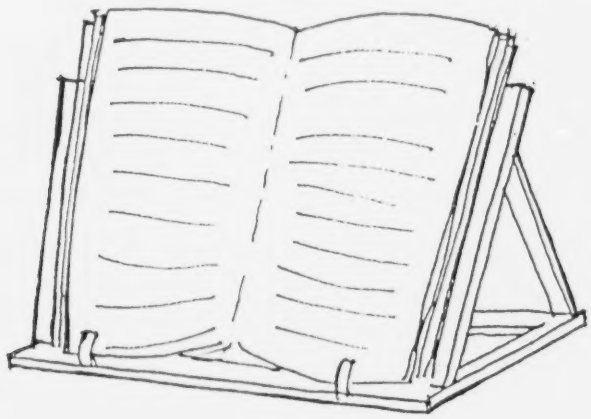


4.2 **Reading room aids**

4.2.1 **Trays or shallow boxes covered in acid free paper or cloth** can be used to hand documents to the reader. Placed on the desk the tray will be used as a reading mat thus ensuring that the documents are handled as little as possible. It also ensures that the archival material does not come into contact with damaging agents. Readers must be told the purpose of such a tray and required to use it, both in the reading room and when returning the document. It necessitates a store of such trays available to staff so that the required document can be placed on the tray directly from the strong room and returned in similar fashion.

4.2.2 **Volume supports.** Many archives will have stocks of book rests which provide no support for the spine or text block when the volume is placed upright. They frequently have small metal restraints sticking up from the shelf at the bottom to hold back the pages which can cause tears (Fig. 3).

Fig.3.

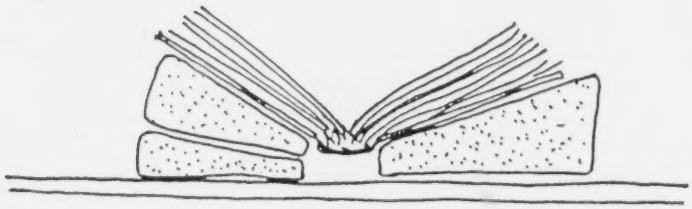


Cushions, foam wedges or cradles are better options to provide support for the boards, text blocks and spines of volumes. Cushions, loosely filled with inert material such as polystyrene beads and covered with soft archival quality cloth, can be moulded to fit any shape thus ensuring that no part of the binding is under stress. (Fig 4).

Fig.4.

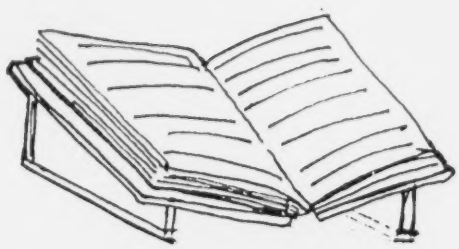
Foam wedges, as developed at the Bodleian Library, can be built up under the boards to accommodate an opening anywhere in the text block. Placed correctly they will leave the spine free to operate without strain on the joints. They should also be made out of inert materials (Fig 5).

Fig. 5



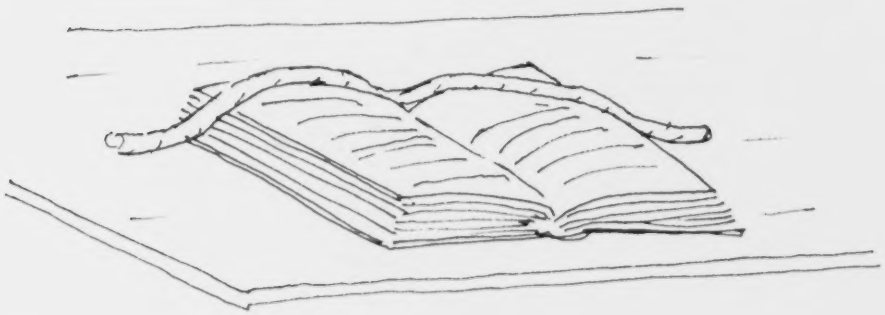
Cradles are a third option; they are most frequently used in exhibitions where a volume is going to be open in the same position for some time since they are constructed round the shape of each opening to ensure support at all points. Made of perspex or, more cheaply, of stiff board, they can be angled to allow easy reading while supporting the text block. They should be made by trained book conservators or technicians for individual volumes (Fig 6).

Fig. 6.



4.2.3 **Restraints.** Covered chains and weights are used to restrain pages. These prevent readers from trying to hold down leaves or to prevent maps from rolling up and allow them to use both hands for their own work. Both types of restraint should be freely available to readers and staff to encourage careful use. The damage inflicted by hands is likely to be considerably greater than from restraints.

Chains, or snakes of lead pellets, covered in a soft, archival quality cloth, can be draped over pages to prevent them turning (Fig 7).



Weights made from either blocks of lead or lead pellets in a bag and covered with leather, can be used to restrain large documents from curling up. Weights, of the bean bag type, are preferable since they mould themselves to the shape of the document and they have no rigid corners to damage documents if they are dropped accidentally (Fig 8.)

Fig. 8

4.2.4 **Transparent sheets** should be provided to cover maps, plans or drawings which readers wish to trace. These can be of any inert clear plastic such as melinex and should be sufficiently rigid to ensure that no pressure is exerted on the original document.

4.2.5 **Ultra-violet lamps.** These can be used to enhance faded ink or reading erasures and should be provided to prevent readers subjecting documents to over-handling in an effort to make out the text. The modern variety are hand held but table top examples are still to be found in archives and libraries.

4.2.6 **Light boxes.** Paper historians who are interested in watermarks have difficulty in seeing these if they have no source of light through which to look. A light box which has measured lux levels prevents over-handling of the document and, if used in conjunction with a piece of clear melinex, can provide a surface over which to trace a watermark.

4.3 **Surrogates and their production.** The use of substitute copies of material can in many cases, reduce substantially wear and tear on the originals.

4.3.1 **Microforms.** The most common form of surrogate is probably the microfilm, or microfiche. These not only ease the pressure on the originals but also permit a much more open access policy which is likely to provide a faster service for the readers. Readers must always be presented with positives made from the archival negative; the latter should be stored in archival conditions and inspected regularly to ensure survival.

4.3.2 **Electro-static copies**. These can be produced as an alternative hard copy when the type of material would make the use of microform clumsy and uneconomic. Indexes are particularly useful in this form and if in heavy demand can be filmed and reprinted cheaply.

4.3.3 **Microfilm reader/printers**. The use of ordinary photocopiers for original documents by readers is not recommended but taking copies from existing film can satisfy the needs of the reader and reduce orders for work done by the archive staff. Readers should be given exact instructions as to how to use a token or coin-operated machine and change should be available.

4.4 **Furniture in the reading rooms.** Furniture can be crucial in providing the correct support for documents and therefore avoiding bad handling.

4.4.1 **Desks** for both readers and staff should be sufficiently large to enable documents as well as paper for note taking to be spread out.

4.4.2 **Tables** supporting microfilm and microfiche readers should provide sufficient space for the paper for note taking by the user. These could be varied sizes. Large tables covered in leather or archival quality cloth to avoid abrasion should be used for maps, plans and oversize documents such as parchment rolls.

4.4.3 **Easels** can be constructed to support the leaves of bulky medieval gatherings of multiple parchment skins joined at the head; they are frequently several skins in length and the total length of the document is too great even for a long table. The leaves can be draped over the easel without imposing any strain on the other parts of the gathering (Fig 9).

Fig. 9

4.5 **Guides for handling archival material.** Written guidance for the use of archival material should be used to inform both readers and staff not only about the best methods of handling but also why they should be adopted. Co-operation from those who use archives is important and requests for particular care should be accompanied by reasoned arguments. Such guidance has been available in some archives or libraries for many years but it is important that it should be kept up to date and re-issued. Pre-war rules were

essentially the same as those of today but the emphasis has changed and the numbers of readers to which they are addressed has increased dramatically. More importantly, there is a basic need to spell out such requirements to a public unused to record offices. Many of the basic rules are taken too much for granted by those who are concerned with archives on a daily basis. The necessity to clarify these has lead to re-assessment and greater awareness of the importance of emphasising and communicating the need for preservation to readers and staff.

4.5.1 **Rules**. It is an accepted fact that institutions have rules and no archive should be shy of issuing clear rules and guidelines. They should be easily visible and made known to all newcomers, whether readers or staff. The format of the rules will vary but a simple, clearly laid out text is likely to have the most direct result. Further explanation or guidance can be given in an explanatory leaflet. Some archives issue rules on coloured paper to distinguish them from other notices; others reproduce them in hand written form using a script which is eye catching; many place a copy on each table to attract the reader when actually using the documents. An enlarged copy can be placed on the wall of the reading room or at the staff desk as a reminder. If staff are trained to approach readers in a co-operative way over the enforcement of rules there should be little danger of becoming too authoritarian.

The following code of good practice should be included in any issue of record office rules and should apply to both readers and staff:

1. Ensure that you have clean hands before handling documents.
2. Handle documents as little as possible.
3. Never disturb the original arrangement of documents.
4. Never touch the text on the surfaces of documents.
5. Never put documents on the floor.
6. Never crease, fold or bend documents.
7. Report damaged documents to the appropriate staff.
8. Re-box, re-assemble or re-tie documents with care.
9. Always use pencil.
10. Never mark documents or erase anything on them.
11. Use pencil sharpeners away from the documents.

12. Always ask permission to take tracings.
13. Do not place any paper, or lean on the documents while taking notes.
14. Do not use hand held copiers or scanners which touch the surface.
15. Do not take photographs.
16. Never eat, drink or smoke while using documents.
17. Do not use any sharp instruments in the presence of documents.
18. Do not use glue, self-adhesive tape or correcting fluid anywhere near the documents.

This may appear a daunting and off-putting list but it contains the basic requirements for good handling and it can be put less bluntly.

4.5.2 **Explanations.** The injunctions can be explained as follows:

1. **Ensure that you have clean hands before consulting documents.** This is a commonsense precaution against transferring dirt from the hands to the document. All record offices should provide washing facilities and encourage their use. Newsprint should be forbidden in the reading rooms on account of the particular danger of transference as well as security. Cotton gloves can be provided for handling photographs to prevent the transference of grease from the hands. They should be made of fine cotton and be washed or replaced regularly. It is a good idea to have a stock in the reading room and to advertise them. It is also worth emphasising that record offices should make every effort to keep documents clean to avoid transference of dirt from one to another.

2. **Handle documents as little as possible.** This may take some explanation but it should be emphasised that repeated handling is one of the main causes of deterioration. If a search is being made for one particular item it should be made with care so that it does not have to be repeated. Carrying containers (see p.12) should be used for moving the document to avoid too much contact. If there is a problem with pages having stuck together or a volume not opening sufficiently to be able to read into the gutter readers should ask for assistance from either an archivist or a conservator.

3. **Never disturb the arrangement of documents.** Documents may be presented in a number of ways, either as separate items in a box, in a ring binder or joined together with a string or thong if medieval, or a treasury tag if modern. Loose paper should be numbered and stored in sequence; if the order is disturbed they should be easy to replace but it is a waste of time for staff to have to do this. If the documents are secured by some means it is less likely that all the individual items will have been numbered; the security of arrangement will be assured by the permanence of the method of storage. Unauthorised removal of individual items by readers can therefore pose considerable problems for replacement. The archival significance of arrangement can be lost and there is the serious danger of items going astray.

4. **Never touch the text on the surfaces of documents.** It may appear obvious to those trained to use archival material that ink on the surface is likely to be fragile but it will be less clear to impatient users. Modern habits include licking fingers to ensure that the surface of the paper is grasped when turning over pages and neither this, nor running a finger along a line should be permitted. To follow the text line by line a clean piece of paper should used to guide the eye (Fig 10).

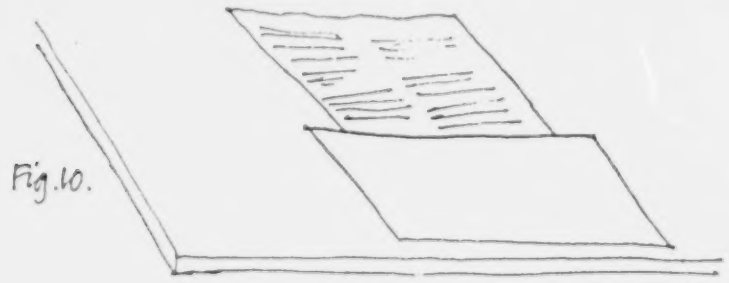


Fig.10.

Illuminated manuscripts and works of art on paper or parchment are more akin to museum or gallery exhibits and are not intended for frequent handling. If possible they should be produced in a protective box and not removed; if they are in a volume it may be worth considering additional supervision. Items of this sort merit special security. The damage caused by handling can include the loss or fragmentation of the pigment as well as damage through touching. Even the use of gloves can be dangerous if the pigment is flaking. Ultra-violet lights should never be used on illuminated material.

Modern media including photographic negatives and prints, microfilms, microfiches, audio tapes and records, magnetic tapes and floppy disks are susceptible to damage from oils and particles of dirt deposited by touching the surface. They should always be held by the edges and gloves should be worn in case of accidental contact. Those which are original audio visual or machine readable records should be handled only by staff and copies should be provided in simple format, such as cassettes, for readers.

Instructions for using microfilm and microfiche readers or tape recorders should be available in the reading rooms to avoid mechanical damage.

5. **Never put documents on the floor.** The floor is dirty and documents placed there are at risk from being stepped on or kicked accidentally. It should be possible to provide additional space if a table or desk has insufficient room. If those using the reading room persistently put boxes or documents on the floor it may be worth reducing the number of documents they are permitted to have any one time.

6. **Never crease, fold or bend documents.** Items which have been flattened for storage but which still bear the marks of earlier folds are sometimes re-folded by well meaning but misguided readers. Other documents are bent or creased through carelessness. Parchment documents which are folded or bent are likely to sustain damage to the ink. The nature of parchment is such that the ink fails to fuse in the same way that it does with paper and is consequently more likely to spring off. Creasing and folding weakens the fibres of both parchment and paper making it more likely to tear or split.

7. **Report damaged documents to the appropriate staff.** It is difficult to explain to readers that if a damaged item is reported it will not necessarily be removed from them instantly. Most repositories are grateful for the information and will make some facility available for the continued use of such a document if it is essential. This could involve an urgent request to the conservators or special provision for using the document. It is, however, essential to build up a stock of references to documents requiring preservation treatment, whether that be better storage, special arrangements for use or conservation treatment. Good rapport between the staff

on duty in the reading rooms and the public is important and many archives depend on the latter for information.

8. **Re-box, re-assemble or re-tie documents with care.** The care taken by staff to pack archives is rarely matched by the ability of users to replace them as they found them. They should be encouraged to ask for assistance if they need it and an effort should be made to keep wrappings as simple as possible. In some cases it will be essential to use tapes and loose wrappers but in others, such as when a map has been attached by a guard and rolled round a cylinder for protection, an integral cover can be provided which merely requires tying up. Tapes which secure loose spines or boards on volumes should be replaced, but it may be necessary for staff to point out the purpose of the tape to readers. Re-storing should be done carefully and no attempt should be made to force material back into cramped spaces. Papers should be re-aligned so that they fit in neatly and any supports, in the shape of boards on either sides, should be replaced. Packing is a preservation measure in its own right and participation by all those using the materials is of benefit to the whole preservation programme.

9. **Always use pencil.** This injunction should include all work in the archive whenever it is done in the presence of records. It therefore applies when orders for photocopies are being made and when notes are being taken from reference books as much as when transcriptions or notes are being taken from documents. Ink, ball-point or fibre tip pens and highlighters are all susceptible to leaking and all leave ineradicable traces in the paper in the case of an accidental spillage. Pencil is the only writing instrument which will leave minimal damage and which can be erased satisfactorily. Even then the use of a soft eraser or draft-clean pad leaves some residual particles in the paper fibres.

10. **Never mark documents or erase anything on them.** The historical or legal validity of archival material might be compromised if later marks are made or any of the evidence is erased. The records are historical documents recording contemporary action which should not bear any suspicion of falsification. Even if a missing word seems obvious to the reader it should never be filled in; later readers will either be able to make the same inferences or might have further information

which invalidates the first assumption. Documents which are dirty should never be cleaned up in the reading room; technical assistance should be sought from the conservation or technical staff who can use harmless erasing materials.

11. **Use pencil sharpeners away from documents.** Standard pencils require sharpening but this should be done well away from the documents in order to avoid marking the documents with graphite shavings. It would seem reasonable for facilities to be provided for this by the archive to prevent readers endeavouring to use their own sharpeners. Modern continuous lead pencils do not pose the same problem.

12. **Always ask permission to take tracings.** Various methods can be used for making tracings of maps and plans but it is fatally easy to damage the original while so doing. It is preferable to suggest that a suitable copy could be made but if this is not possible - on account of size - a rigid clear sheet must be provided and placed between the original and the tracing paper. The sheet must be made of some inert material such as clear melinex. The tracing should be made in soft pencil and the reader must not lean on the document while tracing. Minimum pressure should be used and any colouring on areas of the copy should be done with pencil after it has been removed from the original.

    Requests to take rubbings from bindings require special supervision to ensure that the leather is not pressed too hard. The volume should be placed on a table or bench on some archival cloth and completely covered with the thin but strong rubbing paper; heel ball or very soft pencil (2 or graphite) should be rubbed over the surface to gain an imprint of the design. Avoid the use of very thin paper.

    Every archive should retain the right to refuse permission for either tracing or rubbing if there is any threat to the original material. Photocopying can produce a superior result.

13. **Do not place any paper or lean on the document while taking notes.** Cramped space and large, unwieldy documents often tempt readers to use the document itself as a resting pad for note paper. Alternatively they lean on the part which

they are not reading. Either activity subjects the archival material to unnecessary wear and tear and possible damage; both should be discouraged.

14. **Do not use hand held copiers or scanners.** Small copiers and scanners, hand held, are available on the market and are advertised as being handy for taking instant copies or scanning documents. They are designed to be used on newspaper in column format or pictures and are therefore rarely suitable for use in archives. However they have the advantage of being cheap and involve no waiting. They operate on pressure or by strong light. The use of these machines should be forbidden in archives because of the damage which can be caused. It should be clearly stated that all photocopying from the original should be under the control of the archive and carried out by trained operators who know how to handle archive material. To do otherwise invites the risk of damage to the original and infringements of copyright.

15. **Do not take photographs.** Photography, like electro-static copying, should be under the control of the archive. No cameras should be allowed into the reading rooms but it is probably worth stating the prohibition on taking photographs simply because readers do not realise how damaging flash light emissions can be to written material. The temptation to bypass the rules often comes when no photographic service is provided or it is slow and expensive. In these circumstances it is sensible to have an arrangement with a commercial photographer who has proven experience with written material and who can come in on contract as required.

16. **Never eat, drink or smoke near documents.** The ban on eating should include chewing gum and cough sweets and is often difficult to enforce. To illustrate the danger to documents the consequences of turning pages with sticky fingers and of crumbs falling on documents can be pointed out. Access to food and drink may be easier for staff than for readers and it is important that coffee breaks and lunches are not taken at desks on which documents are spread out. Liquids pose a particular threat since they can dissolve some modern inks and seriously damage parchment. Smoking is both a fire hazard and a health risk and should never be

permitted in archives except in certain specified areas well away from records. Marks from falling ash and cigarette burns in the paper may signal the habits of the author but they should never be perpetrated afterwards. The evidence of danger from passive smoking suggests that public opinion may well be swinging in favour of complete bans within record offices and libraries.

17. **Do not use sharp instruments near documents.** Scissors, Stanley knives, razor blades, scalpels, staplers and penknives have all been left behind in reading rooms giving an indication of the activities carried out by their owners. It is impractical to search each reader on arrival for sharp instruments but it should be made clear that none can be used within the archive. Cutting up photocopies must be done off the premises, stapling must wait until readers are at home and official pencil sharpeners, not penknives, must be used. Staff must be made aware that such office instruments can only be used well away from originals.

18. **Do not use glue, self-adhesive tape or correcting fluid near documents.** The danger to originals from glue and paste is obvious but there is a temptation to use either substance or self-adhesive tape for sticking notes together or mending tears in indexes. In the case of the glue and paste the constituents of commercial varieties may be unknown and there could be problems with reversibility if an accident occurred. In the case of self-adhesive tape there is a very real danger of creating an ineradicable stain on a document, let alone removing the text by attempting to remove the tape. Correcting fluid is equally difficult, if not impossible to remove.

4.5.3 Videos and exhibitions

Videos. The need for careful document handling and the implications of the high cost of conservation work can be emphasised by showing videos to raise awareness. The particular value in this lies in the ability to demonstrate good practice. A number of commercial videos have been produced and are available both in the UK and the USA; details can be obtained from the National Preservation Office at the British Library and the National Preservation Office at the Library of Congress.

Exhibitions. Exhibitions with photographs of good handling techniques and short text explanations can be a cheaper way to inform the public. Coupled with photographs of intricate, and by implication, expensive conservation work it can be used as a public relations exercise to encourage the public to act responsibly.

4.6 Enforcing the rules

The extent to which these rules are adopted and explained will depend on the size and resources of each archive. The extent to which they can be enforced will depend on the numbers of staff who can invigilate not only the reading rooms but also the public parts of the buildings. Ensuring that the rules are also observed by the staff is as important, but is more difficult to ensure; the onus is on each individual to maintain standards.

Readers. The most obvious moment at which to introduce a code of practice is when they are first issued with a reader's ticket. Few archives admit casual visitors other than on a strictly 'visiting only' basis and the point of registration provides the appropriate introduction. Practice varies between simply being handed a copy of the rules, being required to read them over and being asked to read them out loud. While the latter is probably the most effective it is also time consuming. Additional emphasis can be made if readers are required to view an introductory video to the repository which, in addition to explaining how the institution works, can introduce some useful examples of good handling. Initial introduction to the rules can be reinforced in the reading rooms if staff can reiterate some of the rules when explaining about the production of records.

The question of sanctions is for each archive to determine. If unsuitable items are being brought into the reading rooms it is often sufficient to confiscate them until the reader leaves. The persistent offender against good handling practice should be interviewed by senior staff and made aware of the gravity with which such infringements are viewed.

Staff. All staff should be introduced to the rules together with an explanation of the reasons for their enforcement when they start work. It is particularly important not to leave such essential induction to later training sessions since good practice must be inculcated from the start. For those working in the public areas it is imperative that they

understand the reasons for the rules so that they can answer any relevant questions from members of the public. The rules should be strictly observed in staff areas as well as in the reading rooms; more accidents happen to archival material as a result of mis-handling by staff than by readers. Monitoring must be done by line managers initially but all members of staff should be on the look out for lax practice. It is particularly important that senior staff observe the rules and are seen to do so by juniors. Sanctions for staff are again a matter for each individual archive.

5. TRAINING

5.1 Training for readers

Training in the context of an archive where individual readers have come to use the material rather than receive instruction is difficult. Formal sessions are unlikely to be wellattended but it is clear from the comments they make that readers do notice the way in which staff handle documents. On an individual basis therefore the best suggestion is to demonstrate good practice whenever possible in all parts of the archive.

5.1.1 **Individual readers**. In the reading rooms individual readers can learn from good handling practices when archival material is either handed to them or left out for them to collect. Staff should never carry more than one or two documents at a time and should set them down on the counter or the desk carefully.

Individual documents may be presented to the reader on a tray, in a box, encapsulated in transparent polyethylene or interleaved in a fascicule. It should be explained that all these are methods of protecting the document; if the tray is a suitable size it should be kept in it while being read or removed from the box carefully and placed on the desk away from other papers.

Encapsulated material may require explanation; it is enclosed, using heat sealing or ultra-sound, in clear melinex to permit both sides of the document to be seen but not touched. Handling is reduced to a minimum as a result. Some archives or libraries tip documents into fascicules (gatherings of acid free paper) which permit the reader to look at the

material but turning the pages is achieved by turning the protective leaf. It is likely to be used in situations where particularly valuable music or literary manuscripts are heavily consulted by readers.

Files or bundles of documents also require handling instructions. Staff should point out that turning papers attached at the side or at the top requires care, particularly if they have been exposed to light for any length of time and the tag or clip may be causing wear and tear. Readers should be encouraged to report the presence of any paper-clips or pins. Bundles of documents which are tied up should be carefully undone and the documents taken apart individually; they are quite capable of sticking together if they have been done up for a long time. Tape or string should be kept and any original wrapping materials pointed out. No more than one bundle should be undone at once in order to avoid mixing up the contents.

Rolls of parchment should be laid flat (see p.17) and unrolled carefully, re-rolling from the beginning at the same time to avoid too great a length being exposed at any one time.

Parchment documents gathered at the head should be leant gently against the front of an easel (see p.17) and the front sheet lifted back over the head until the whole document will balance without further restraint. Shelves halfway down the front and back can support the bottom half of the document and prevent it being dragged down by its own weight. Great care must be taken since manipulating documents of this size is always hazardous.

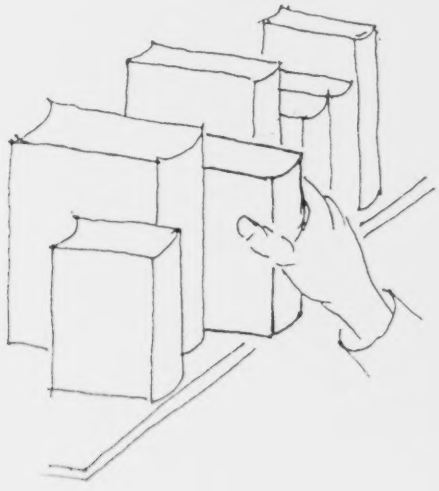
Individual textile samples or garments should be unwrapped on a large table as should any of the three dimensional objects such as small chests, boxes or seal skippets, writing materials or memorabilia which turn up amongst archives from time to time.

Book supports should be brought out for those readers who require them at the time that the volume is handed over. Placing the volume on the cushion (see p.13) and ensuring that both boards and spine are fully supported will indicate to the reader that care must be taken. Similarly, building up sufficient support with foam wedges under both boards and leaving the correct space for the spine will demonstrate the need for good handling. The reader should be shown how wedges can be withdrawn and re-inserted in order to keep the opening in the correct position at all times. (See p.14)

Tracing paper, ultra-violet lamps and light boxes can be explained as appropriate.

The proper way to extract a reference volume from a shelf can also be demonstrated. It should be grasped by the spine and gently pulled towards the reader rather than being pulled from the headband and jerked backwards to get a grip. The books on the shelf should be sufficiently loose for this to be possible but if they are too tight the two books on either side should be pushed to the back to allow room to grasp the spine. (Fig 11.)

Fig.11.



The volume should be laid on a table or the support provided and opened gently without cracking the spine. Perfect bound volumes, which are made up of individual sheets bound together with a thick layer of adhesive on the spine, are particularly prone to damage if forced open. Volumes should never be laid face down on surfaces.

Microfilm and microfiche readers are unfamiliar to some users and advice on how to avoid scratching film or tape by inserting it correctly is important.

Enforcement of the rules in the reading room is the responsibility of the invigilating staff and it is important that readers realize that the rules are there to be heeded. It is unlikely that they will follow a code of practice otherwise. Demonstrating to one reader how to handle material properly frequently attracts the attention of other readers who may change their own habits as a result.

5.1.2 **Group visits** The opportunity to impress the necessity of good handling practice should never be lost and group visits are an ideal moment. Unlike the individual reader, groups arrange visits in order to be instructed either about the means of reference in the archive or the sources for a particular subject. In either case they are impressionable. A request for all the party to go and wash their hands before original documents are explained by staff is likely to be a novelty, but the implication is clear.

5.1.3 **Videos** on handling with care are a useful teaching aid in this context. They should be short and not attempt to put over too much information. In-house videos have the advantage of describing the particular circumstances, commercial videos may be more professional in their approach.

5.1.4 **Staff demonstration.** If documents are out on display for members of a party to examine they provide an opportunity to explain where they are particularly fragile and why; most readers will take greater care if they understand the reasons for rules about handling.

5.2 **Training for staff**

Document handling should be a major part of the training programme of any archive. Certain core aspects should be taught to all but additional skills need to be taught to repository and reprographic staff.

5.2.1 **Core skills**

1. Ensure that your hands are clean when working on archival material.
2. Ensure that you have enough space to get documents out of their boxes and on to tables. Archival material should never be put on the floor even in boxes.
3. Handle documents as little as possible. The major damage is done by staff handling and it is sobering to think how many times a document is handled each time it is ordered. A strong room should be provided for staff use so that documents do not have to be returned to the main repository every evening. Unnecessary ordering should be avoided; if it is possible to provide suitable consultation areas in situ handling can be reduced. Keep all archival material on a special table so that it does not have to be moved to make way for other things.

4. Handle documents with care. This may seem axiomatic but familiarity with crumbling edges and disintegrating bindings can lead to carelessness. Filed papers should be turned over carefully to avoid tearing. If they are in a ring binder or bound together they should be grasped by the corner to be turned, not close to the left hand margin. Conservators will advise on the proper handling of flaking or disintegrating documents.
5. Avoid touching the text on the surface of any documents and take particular care not to touch the surface of illuminated manuscripts, photographic or audio-visual material.
6. Nothing should be placed on top of documents other than restraining weights and these should not be put on top of any text.
7. Pencils should be used at all times when working with archival material.
8. Pencil-sharpeners should be used only in specified areas.
9. Never eat, drink or smoke in the vicinity of archival material. Tea and coffee breaks as well as meals should be taken away from the desk.
10. Keep sharp instruments and correcting fluid in a special drawer well away from any archival materials.
11. Do not try to do any first-aid to damaged documents without advice from a conservator. Never use glue, paste or pressure sensitive tape on paper.
12. Never crease, fold or bend documents. Re-boxing, re-assembling and re-tying of documents should be done with the original materials. If the material does not fit advice should be sought from conservators or repository staff.
13. No more than two standard size boxes should be carried by staff at any one time to avoid the danger of dropping them. If it is necessary to transport more they should be put on a trolley but even then they should not be in piles of more than two.
14. Outsize documents must be carried individually or preferably on trolleys. Care must be taken not to attempt to carry anything too heavy and if necessary two members of staff should be used. Health and safety guidelines about the best methods of picking up heavy items should be observed.
15. No more than three standard size volumes should be carried by staff at any one time; book trolleys should be used for any greater number.
16. Individual books should be removed from shelves by grasping the spine; if they are being moved in quantity remove two or three at a time and place on the

shelf on the trolley in the order in which they came.

17. Trolleys should be wheeled with care ensuring that they do not bump into walls or other stacks.

5.2.2 **Handling skills for repository staff.** Repository staff, porters or messengers have a particular need for training in handling skills. They will be responsible for more handling than any other section of the archive. They should be taught all the core skills and particular emphasis should be put on the health and safety requirements. Correct posture and lifting techniques are essential.

Special handling skills should include the following;

1. Remove and return boxes or large documents from shelves with two hands; one should draw the item off the shelf with the other underneath to support it. Security will be provided in this way if either the box or binding should give way.
2. Move volumes about in book trolleys.
3. Remove and return maps, plans and outsize single documents from map cabinets with great care. If there is an inside restraining flap in the drawer it should be lifted before trying to extract or return the item.
4. Remove and return rolled maps from shelves by restraining the adjacent maps with one hand and using the other for the map. If there is too great a pile of rolls never pull one out without removing those above first.
5. Put maps, plans and large single documents in portfolios for support before using a map trolley to move them.
6. Use special, lined boxes for fragile materials such as glass negatives or delicate textiles.
7. If it is necessary to move large quantities of volumes in crates, for instance by van to another building, they should either be placed flat or spine down to provide support. The temptation to put them spine up for identification must be resisted; a list of references should be sent in addition. They must only be packed one row deep. This technique should also be used when moving volumes away from the scene of a flood or fire.
8. Use lifts to move materials from one floor to the other; never carry more than one item up or down stairs.

9. Shelve material awaiting collection by readers with care. Varying sizes and types of documents will be stacked next to each other and adequate support should be given to individual items.

10. Put outsize material, maps, plans or flat documents on tables, not shelves.

11. Moving archival material from one building to another should be done in a van for protection from the weather and security. If it is essential to carry individual items an unidentified waterproof pouch or bag should be used.

12. Packing any kind of transit van should be done with great care so that the material is securely restrained against supports. Specialized vans should be used with slats on the walls to which straps can be attached and pigeon holes for standard size materials if possible. Nothing should travel without a protective covering; individual items should be in boxes, folders, pouches or portfolios.

13. The use of forklift trucks to move documents on pallets is a convenient way of transporting bulk quantities from one place to another but there is danger from overloading and in using power machinery in conjunction with archival material.

5.2.3 **Handling skills for reprographic staff.** Staff involved with the photography, photocopying or microfilming of archival material need training for an unusual type of handling. They are required to subject the material to stresses and strains which are potentially damaging.

Preparation for copying is important as it may involve un-tagging files in order to film individual items or, in extreme cases, dis-binding volumes. The latter is not recommended and should only be undertaken by a conservator. Un-tagging, and subsequent re-tagging of modern archival material held together at the top left hand corner must be done carefully to avoid tearing; the paper is frequently weak having borne the brunt of being turned and the punched hole may be torn or enlarged.

It must be emphasized that any form of reprography can do some damage although the very fact of having made a copy should reduce the need to consult the original. It is in itself a preservation measure. Handling the material on the machines currently available is, however, not easy.

Photography. Good handling practice is easiest with conventional photographic methods since the archival material can be placed on a suitable surface and left there. It should be handled as little as possible according to the general guidelines.

Photocopying. The provision of archivally sound photocopiers is long awaited. Although several overhead machines do exist they are none of them wholly satisfactory. In consequence few archives own them although they are more common in libraries where they are used for standard sized volumes rather better suited to the machines. Archival material should never be copied on a machine with a moving platen; such machines are designed as office copiers. Most archives still use fixed bed copiers and attempt to minimize the damage from the necessity to turn the material upside down. It is tempting to view this process as a repetitive task which can be carried out by semi-skilled staff; good handling technique is vital.

Despite the inevitable pressure to work fast photocopying should be done carefully to avoid subjecting the archival material to repeated copying; the archival copy should be stored, having itself been copied. Subsequent copies should be taken from this second generation, but replaceable, film.

A firm policy about which material is suitable for copying should be drawn up and adhered to. It is unsuitable for the following;

documents in poor condition
parchment documents
illuminated or painted documents
documents larger than the size of the platen on the machine
documents with seals
large maps or plans
volumes with disintegrating spines, joints or boards
large or heavy volumes

The material to be copied has to be turned upside down to put it on the platen; single items should be turned over carefully and after the copy has been made should be placed on an adjacent table. It is important to have enough table space in the reprographic area.

Volumes should be checked to ensure that there are no loose items which could fall out before they are turned over. The platen should be of an adequate size to support both pages fully. If double page spreads are to be copied the spine of the volume should not be forced down on to the platen since this is likely to weaken it. It is better to take a single copy of each page, supporting the other half carefully if necessary.

Microfilming. The advantages in handling archival material for microfilming are that the material remains static on a support; the disadvantages are that the operators are required to work to a programme based on frames per minute. In addition the repetitive nature of the task is likely to bore the operators who are therefore less likely to attend to careful document handling. All the core handling skills apply but particular care should be paid to the technique of turning pages. It is important to have the bed of the machine in a comfortable position for the operator so that the archival material can be handled with ease.

6. SUMMARY GUIDELINES

Internal references are to previous paragraphs.

Physical aids (4.1). Provision of the correct aids to handling is important in both the repository and the reading rooms. These include:-

- mechanical handling devices (4.1.1) - continuous tracks, lifts and trolleys are all means of moving documents safely around the archive
- trolleys should be designed for specific purposes.

Reading room aids (4.2) - equipment designed to help the readers towards good handling practices. These include:

- trays or shallow boxes (4.2.1) to transport documents and support them, thus avoiding over-handling
- volume supports (4.2.2) such as cushions, foam wedges or cradles to support heavy, oversize or bulky volumes

- restraints (4.2.3) such as chains or weights to hold back pages or prevent maps and large documents from curling up thus avoiding over-handling
- transparent sheets (4.2.4) to enable tracings to be made without damage to the original document.
- ultra-violet lights (4.2.5) to enhance faded or obliterated writing and avoid damage through over-handling
- light boxes (4.2.6) for easy identification of watermarks without having to hold the original up to a bright light
- microfilm reader/printers (4.2.7) to allow readers to make their own photo-copies from film thus saving the original from being copied more than once.

Furniture in the reading room (4.3) should be appropriate for careful handling of archival material;

- desks (4.3.1) should be designed to be suitable for work with documents
- tables (4.3.2) should be available for use with large documents
- easels (4.3.3) should be used with medieval material where several parchment skins are joined at the head.

Guides for handling archives (4.4) should be drawn up to ensure that both readers and staff are well aware of the requirements;

- rules (4.4.1) on how to handle the documents should be available and visible
- explanations (4.4.2) of the rules and the rationale behind them should be laid out in a leaflet or as a memo for reference as necessary
- videos and exhibitions (4.4.3) can help to demonstrate the need for handling with care.

Enforcing the rules (4.5) is important for the care of archival material and to demonstrate that the institution is serious about good handling practices

- readers (4.5.1) - the best moments for introduction to good handling practices
- staff (4.5.2) - the importance of inculcating good practices from the beginning of their employment

Training (5) is essential since neither readers nor staff are likely to practice good handling techniques unless they are taught to appreciate the importance of care for archival material.

Training for readers (5.1) - the best ways to approach them;

- individual readers (5.1) - the instructions which should be issued for the use of different types of materials and categories of archives
- group visits (5.1.2) - the advantage of being able to talk to a captive audience
- videos (5.1.4) - the value of showing these to groups
- staff demonstrations (5.1.5) - one of the best ways of emphasizing the importance of good handling practice.

Training for staff (5.2) - core skills for all staff and special additional skills for repository and reprographic staff;

- core skills (5.2.1) listed with an emphasis on the use of documents within staff areas
- handling skills for repository staff (5.2.2) - the additional skills needed for the careful moving of documents from the stacks to the reading rooms
- handling skills for reprographic staff (5.2.3) - the additional skills needed for ensuring the safety of archival material which is being copied.

7. CONCLUSIONS

The conclusions to be drawn from the adoption of a 'handle with care' policy can be considered as follows;

7.1 It will prolong the life of archival material.

7.2 It saves money in delaying the need for conservation.

7.3 It is a skill which every reader and member of staff can acquire.

7.4 It is determined by the attitude adopted towards such material.

7.5 It will raise the profile of archives and manuscripts to that accorded to museum objects.

7.6 It will slow down production times to readers and staff.

7.7 It costs money in staff time spent on drawing up rules and explaining good practice to readers.

The conflict between preservation and access may be apparent in this list but raising the profile of archival material should result in a change of attitude which in itself will make fewer demands in the way of speed of production. Archives and record offices have acceded to the increasing demands of readers for so long that resistance to such pressure is rare. It is time to strike a balance between the requirements of the archival material, the resources of the institution and the needs of the readers.

8. FURTHER READING

The literature on handling archival material is sparse compared to that on library material. No doubt this is due, in part, to the difference between open access material and that which has to be fetched specially. References to library manuals have been included however since the principles are the same as for handling archival volumes. Other recommendations occur within general handbooks for the most part but they have been listed in order to offer scope for further reading.

Baynes-Cope, AD Caring for books and documents (British Library, 1988)

British Library It just came apart in my hands (British Library Preservation Guide No. 1)

British Standards Institution
Recommendations for the storage and exhibition of archival documents (BS 5454, 1989)

Buchanan, S and Henry, W
Users' guide to the conservation of library materials (Stanford University Libraries, 1980)

Greenfield, J The care of fine books (Nick Lyons Books, New York, 1988)

Lowry, MD — Preservation and Conservation in the small library (Small library publications No. 15) (Chicago, Library Administration and Management Association, American Library Association, 1989)

Pederson, A ed. — Keeping archives (Society of Australian Archivists, 1987)

Ritzenthaler, ML — Archives and manuscripts conservation, a manual on physical care and management (Chicago, Society of American Archivists, 1983)

Roper, M — Planning, equipping and staffing an archival preservation and conservation service; a RAMP study with guidelines PG1-89/WS/4 (Unesco, Paris, 1989)

TAPES AND VIDEOS

Handling books in general collections (Library of Congress, Washington, 1984)

Handling printed books (National Preservation Office, British Library, 1989)

Handling with care (Society of Archivists, London, 1987).